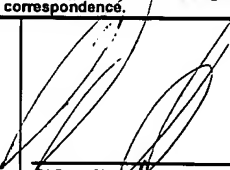


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| <b>TRANSMITTAL LETTER TO THE UNITED STATES<br/>DESIGNATED/ELECTED OFFICE (DO/EO/US)<br/>CONCERNING A FILING UNDER 35 U.S.C. 371</b>  |  | ATTORNEY'S DOCKET NUMBER<br><b>4684-025</b>  |
|  |  | U.S. APPLICATION NO. (if known, see 37 CFR 1.5)<br><b>Not Yet Assigned 10/542613</b> |
| INTERNATIONAL APPLICATION NO.<br><b>PCT/KR2004/000074</b>  | INTERNATIONAL FILING DATE<br><b>January 16, 2004</b> | PRIORITY DATE CLAIMED<br><b>January 16, 2003</b>                                     |
| TITLE OF INVENTION<br><b>METHOD FOR MANUFACTURING OF POLYMER MICRO NEEDLE ARRAY WITH LIGA PROCESS</b>  |  |  |
| APPLICANT(S) FOR DO/EO/US<br><b>Seung-seob LEE and Sang-Joon MOON</b>  |  |  |
| Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:  |  |  |
| <ol style="list-style-type: none"> <li>1. <input checked="" type="checkbox"/> This is a <b>FIRST</b> submission of items concerning a filing under 35 U.S.C. 371.</li> <li>2. <input type="checkbox"/> This is a <b>SECOND</b> or <b>SUBSEQUENT</b> submission of items concerning a filing under 35 U.S.C. 371.</li> <li>3. <input type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) as indicated below.</li> <li>4. <input type="checkbox"/> The US has been elected (Article 31).</li> <li>5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2))           <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> is transmitted hereto (required only if not communicated by the International Bureau).</li> <li>b. <input checked="" type="checkbox"/> has been communicated by the International Bureau.</li> <li>c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US)</li> </ol> </li> <li>6. <input checked="" type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).           <ol style="list-style-type: none"> <li>a. <input checked="" type="checkbox"/> is attached hereto.</li> <li>b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4).</li> </ol> </li> <li>7. <input type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))           <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau).</li> <li>b. <input type="checkbox"/> have been communicated by the International Bureau.</li> <li>c. <input type="checkbox"/> have not been made; however, the time limit for making such amendment has NOT expired.</li> <li>d. <input type="checkbox"/> have not been made and will not be made.</li> </ol> </li> <li>8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).</li> <li>9. <input checked="" type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).</li> <li>10. <input type="checkbox"/> An English language translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).</li> </ol> |  |  |
| <b>Items 11 to 20 below concern document(s) or information included:</b>   |  |  |
| <ol style="list-style-type: none"> <li>11. <input type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.</li> <li>12. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.</li> <li>13. <input type="checkbox"/> A preliminary amendment.</li> <li>14. <input checked="" type="checkbox"/> An Application Data Sheet under CFR 1.76</li> <li>15. <input type="checkbox"/> A substitute specification.</li> <li>16. <input type="checkbox"/> A power of attorney and/or change of address letter.</li> <li>17. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821-1.825</li> <li>18. <input type="checkbox"/> A second copy of the published international application under 35 U.S.C. 154(d)(4)</li> <li>19. <input type="checkbox"/> A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4)</li> <li>20. <input checked="" type="checkbox"/> Other items or information:      Claim of Priority</li> </ol>   |  |  |

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| U.S. APPLICATION NO. (if known, see 37 CFR 1.5)<br><b>10/542613</b>  |               | INTERNATIONAL APPLICATION NO.<br><b>PCT/KR2004/000074</b>                     |   | ATTORNEY'S DOCKET NUMBER<br><b>4684-025</b> |                 |
| The following fees are submitted:  |               |   |   | CALCULATIONS      PTO USE ONLY              |                 |
| 21. <input checked="" type="checkbox"/> Basic national fee ... \$ 300.00   |               |   |   | \$ 300.00                                   |                 |
| 22. <input checked="" type="checkbox"/> Examination fee<br>If International preliminary examination report prepared by USPTO and all claims satisfy provisions of PCT Article 33(1)-(4) ... \$ 100.00<br>All other situations ... \$ 200.00  |               |   |   | \$ 200.00                                   |                 |
| 23. <input checked="" type="checkbox"/> Search fee<br>Search fee (37 CFR 1.445(a)(2)) has been paid on the international application to the USPTO as an International Search Authority ... \$ 100.00<br>International Search Report prepared and provided to the Office ... \$ 400.00<br>All other situations ... \$ 500.00  |               |   |   | \$ 500.00                                   |                 |
| <b>TOTAL OF 21, 22 and 23 =</b>  |               |   |   | <b>\$1,000.00</b>                           |                 |
| <input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing or computer listing filed in an electronic medium). The fee is \$250 for each additional 50 sheets of paper or fraction thereof  |               |   |   |   |                 |
| Total Sheets   | Extra sheets  | Number of each additional 50 or fraction thereof (round up to a whole number) | RATE  |   |                 |
| - 100 =  | /50 =         |   | × \$250.00  | \$  |                 |
| Surcharge of \$130.00 for furnishing the oath or declaration later than 30 months from the earliest claimed priority date (37 CFR 1.492(e)).   |               |   |   | \$  |                 |
| CLAIMS   | NUMBER FILED  | NUMBER EXTRA  | RATE  |   |                 |
| Total Claims   | 3      - 20 = | 0   | × \$ 50.00  | \$  | 0.00            |
| Independent Claims   | 1      - 3 =  | 0   | × \$200.00  | \$  | 0.00            |
| MULTIPLE DEPENDENT CLAIM(S) (if applicable)  |               |   | + \$360.00  | \$  |                 |
| <b>TOTAL OF ABOVE CALCULATIONS =</b>   |               |   |   | <b>\$</b>                                   | <b>1,000.00</b> |
| <input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by ½.   |               |   |   | \$  | 0.00            |
| <b>SUBTOTAL =</b>  |               |   |   | <b>\$</b>                                   | <b>1,000.00</b> |
| Processing fee of \$130.00 for furnishing the English translation later than the 30 months from the earliest claimed priority date (37 CFR 1.492(f)).  |               |   |   | +   | \$ 0.00         |
| <b>TOTAL NATIONAL FEE =</b>  |               |   |   | <b>\$</b>                                   | <b>1,000.00</b> |
| Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property   |               |   |   | +   | \$ 0.00         |
| <b>TOTAL FEES ENCLOSED =</b>   |               |   |   | <b>\$</b>                                   | <b>1,000.00</b> |
|  |               |   |   | Amount to be refunded:                      |                 |
|  |               |   |   | Amount to be charged                        |                 |
| a. <input type="checkbox"/> A check in the amount of \$ _____ .00 to cover the above fees is enclosed.<br>b. <input type="checkbox"/> Please charge my Deposit Account No. <u>07-1337</u> in the amount of \$ _____ to cover the above fees. A duplicate copy of this sheet is enclosed.<br>c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. <u>07-1337</u> . A duplicate copy of this sheet is enclosed.<br>c. <input checked="" type="checkbox"/> Fees are to be charged to a credit card. <b>WARNING:</b> Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038. |               |   |   |   |                 |
| NOTE: Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status. Kindly use the attorneys' address associated with the following Customer Number for future correspondence.  |               |   |   |   |                 |
| SEND ALL CORRESPONDENCE TO:<br><br>LOWE HAUPTMAN & BERNER, LLP<br>1700 Diagonal Road, Suite 300<br>Alexandria, VA 22314<br>(703) 684-1111  |               |   | <div style="text-align: center;"> <b>Customer</b><br/> <b>No. 22429</b><br/> <small>PATENT TRADEMARK OFFICE</small> </div> <div style="text-align: center;"> <br/> <b>SIGNATURE</b><br/> <b>Benjamin J. Hauptman</b><br/> <b>NAME</b><br/> <b>29,310</b><br/> <b>REGISTRATION NUMBER</b> </div> |   |                 |